

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
1 November 2001 (01.11.2001)

PCT

(10) International Publication Number  
**WO 01/80771 A2**

- (51) International Patent Classification<sup>7</sup>: **A61F** LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.
- (21) International Application Number: PCT/US01/11679
- (22) International Filing Date: 10 April 2001 (10.04.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data: 09/558,354 26 April 2000 (26.04.2000) US  
Declaration under Rule 4.17:  
— of inventorship (Rule 4.17(iv)) for US only
- (71) Applicant and  
(72) Inventor: RUBIO, Ilse [US/US]; 1402 N. Alta Vista Boulevard # 208, Los Angeles, CA 90046 (US).  
Published:  
— without international search report and to be republished upon receipt of that report
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).



WO 01/80771 A2

(54) Title: CLOSE FITTING LEAKAGE RESISTANT FEMININE HYGIENE PAD

(57) Abstract: A feminine hygiene pad having a wide absorbent front portion and a narrower, elongated rear portion of sufficient length to be retained between the buttocks of a user to better fit against the user's body and thereby control rearward leakage of fluid. The hygienic pad is smaller and better fitting and can be worn more discreetly with small sized and tight fitting garments.

## CLOSE FITTING LEAKAGE RESISTANT FEMININE HYGIENE PAD

## Background of the Invention

## 5 Field of the Invention

This invention relates to feminine hygiene pads.

## State of the Prior Art

10

Feminine hygiene pads are disposable, liquid absorbent pads applied to the crotch area by women in order to absorb menstrual fluids. Existing feminine hygiene pads are symmetrical in shape along a longitudinal dimension, with wider rounded ends and a narrower mid-portion defined between opposite concave side edges. In existing

15 pads the wide rear portion of the pad fits over the buttocks and allows menstrual fluids to leak to the rear of the thighs and onto the buttocks. This prevents women wearing these pads from sleeping on their backs in order to control such leakage. Another shortcoming of existing pads is that they are oversized and cannot be worn discreetly with skimpy or small garments or tight fitting clothing.

20

A need exists for improved feminine hygiene pads which fit better to the contour of the user's body to control rearward leakage of menstrual fluid and to permit discreet use of the pad with close fitting or skimpy clothing.

25

## Summary of the Invention

This invention addresses the aforementioned need by providing a feminine hygiene pad having an absorbent forward pad portion, the forward portion having a longitudinal dimension and a transverse dimension, and a rear portion extending from

30 the forward portion along the longitudinal dimension and having a width lesser than one half of the transverse dimension.

The width of the rear portion may be about one-third of the transverse dimension and the rear portion may have a length of approximately one-third of the aforementioned

35 longitudinal dimension. The forward portion may have a wider front and a narrower mid-portion, both the forward portion and the mid-portion being substantially wider than the

rear portion. The rear portion is of sufficient length in the direction of the longitudinal dimension to be retained between the buttocks of a user, and preferably the rear portion is formed integrally with the forward portion and is made of the same material as the forward portion. The forward portion has an absorbent body bonded along a perimeter thereof by a bonded edge. The mid-portion has two opposite concavely curved sides and a convexly curved front edge, while the rear portion may have generally parallel sides in the direction of the longitudinal dimension, such that the rear portion is a generally rectangular elongated tab.

10 More generally, this invention is a feminine hygiene pad having a longitudinal dimension along the length thereof, a relatively wide absorbent frontal portion and a much narrower elongated rear portion sized for retention between the buttocks of a user.

Set forth below is a brief summary of the invention which achieves the foregoing and other objectives and provides the foregoing and hereafter stated benefits and advantages in accordance with the structure, function and results of the present invention as embodied and broadly described herein. This feature is specific to, but not limited by this specificity, the need to prevent leakage of fluids, the main point of absorbency is in the main portion of the pad. Another feature of this aspect of the  
20 Feminine Hygiene Pad is that it is of minimal size and is intended to be worn with small sized textile and tight fitting garments.

#### Brief Description of the Drawings

25 Fig. 1 is a top view of the feminine hygiene pad;  
Fig. 2 is a right side view thereof;  
Fig. 3 is a left side view thereof;  
Fig. 4 is a rear end view thereof;  
30 Fig. 5 is a bottom view thereof; and  
Fig. 6 is a front end view thereof.

///

///

///

35

## Detailed Description of the Preferred Embodiment

With reference to the drawings, Fig. 1 shows the feminine hygiene pad generally designated by the numeral 10. The feminine hygiene pad 10 has an absorbent front portion 12 having a longitudinal dimension between a front end 14 and a rear portion 20, and a transverse dimension between a left side edge 16 and a right side edge 18. The top view of the pad in Fig. 1 with top pad surface 15 is seen to be similar to the bottom view of the pad with bottom pad surface 17 in Fig. 5. The two side edges 16, 18 of the front portion are seen in Fig. 1 to have concave portions 22 which define a narrower mid-portion 24 in relation to the wider front 26 defined by convex front edge 28. The pad is also seen to have a thicker central portion or absorbent body 30 which is permanently bonded at its perimeter by bonded edge 32. The side edges 16, 18 have convergent portions 34 which taper inwardly to a transition 36 from which extends the rear portion 20. The rear portion 20 is seen to have two straight mutually parallel sides 38 and a transverse rear edge 40. The side edges 38 are relatively long in relation to the rear edge 40 such that the rear portion is a generally rectangular elongated tab extending from the forward portion 12 along the longitudinal dimension. It will be further seen from the drawings that the rear portion 20 is much narrower than the front portion 12, and in the illustrated embodiment the width of the rear portion 20 is about one third the width between the side edges 16, 18 of the front portion 12. The drawings further show the rear portion to have a length, as measured along the side edges 22 from the transition 36 to the rear edge 40, also of about one third the length of the front portion as measured from the front end 14 to the transition 36. The elongated rear portion 20 is integral with the forward portion 12, and preferably is made of the same materials, the choice of which will be apparent to those skilled in the art.

The use and proper application of the hygiene pad 10 will be evident to those of the female gender by inspection of the drawings without further explanation. It may be briefly said that the wider forward portion is applied over the vaginal opening while the rearward appendage 20 is worn between and retained between the buttocks. This use of the rearward appendage 20 is evident from the widespread use among women of long style undergarments which in part are similarly worn between the buttocks, in contrast to conventional briefs which are worn over the buttocks. The appendage 20 is thus able to retain the rear of the absorbent forward portion closer against the body following the contour of the crotch area and thereby better absorb and control rearward

leakage of fluid from the vaginal area towards the rear of the thighs and the buttocks.

This permits the user to sleep on her back with much reduced risk of rearward leakage of fluids. The elongated rear appendage is received between the user's buttocks and

insures that the pad stays in place, and also replaces the wide rear end of conventional

5   hygienic pads thereby reducing the size of the pad so that it can be more discreetly worn with small sized textiles and tight fitting garments.

An absorbent article; as apparent in figures 1 through 6, the preferred embodiment consists of an absorbent body (1). The Absorbent body (1) is adhered or  
10   otherwise permanently bonded at its perimeter by the bonded edge. (2) A positioning point is formed on the main absorbent portion of the pad and an absorbent point is formed on the main portion of the pad. ( 3) The Elongated Rearward Appendage is fabricated of the same material as, and at the same time as the Absorbent body. The  
ELONGATED REARWARD APPENDICE is considered to be integral to the Absorbent

15   Body (1) and the invention as a whole.

What is claimed is:

## CLAIMS

1. A feminine hygiene pad having an absorbent forward pad portion, said forward portion having a longitudinal dimension and a transverse dimension, and a rear portion  
5 extending from said forward portion along said longitudinal dimension and having a width lesser than one half of said transverse dimension.
2. The feminine hygiene pad of Claim 1 wherein said width of said rear portion is about one-third of said transverse dimension.  
10
3. The feminine hygiene pad of Claim 1 wherein said rear portion has a length of approximately one-third of said longitudinal dimension.
4. The feminine hygiene pad of Claim 1 wherein said forward portion has a wider front  
15 and a narrower mid-portion, both said forward portion and said mid-portion being substantially wider than said rear portion.
5. The feminine hygiene pad of Claim 1 wherein said rear portion is of sufficient length in the direction of said longitudinal dimension to be retained between the buttocks of a  
20 user.
6. The feminine hygiene pad of Claim 1 wherein said rear portion is formed integrally with said forward portion.
- 25 7. The feminine hygiene pad of Claim 6 wherein said rear portion is made of the same material as the forward portion.
8. The feminine hygiene pad of Claim 1 wherein said forward portion has an absorbent body bonded along a perimeter thereof by a bonded edge.  
30
9. A feminine hygiene pad having a longitudinal dimension along the length thereof, a relatively wide absorbent frontal portion and a much narrower elongated rear portion sized for retention between the buttocks of a user.

10. A feminine hygiene pad having an absorbent forward pad portion, said forward portion having a longitudinal dimension and a transverse dimension, said forward portion having a wider front and a narrower mid-portion, and a rear portion integral with and extending from said forward portion along said longitudinal dimension, said rear portion  
5 having a width of about one-third of said transverse dimension and of sufficient length in the direction of said longitudinal dimension to be retained between the buttocks of a user.

11. The feminine hygiene pad of Claim 10 wherein said rear portion has a length of  
10 approximately one-third of said longitudinal dimension of said forward portion.

12. The feminine hygiene pad of Claim 10 wherein said mid-portion has two opposite concavely curved sides and a convexly curved front edge.

13. The feminine hygiene pad of Claim 10 wherein said rear portion has generally  
15 parallel sides in the direction of said longitudinal dimension.

14. The feminine hygiene pad of Claim 13 wherein said rear portion is a generally rectangular elongated tab.

20

///

///

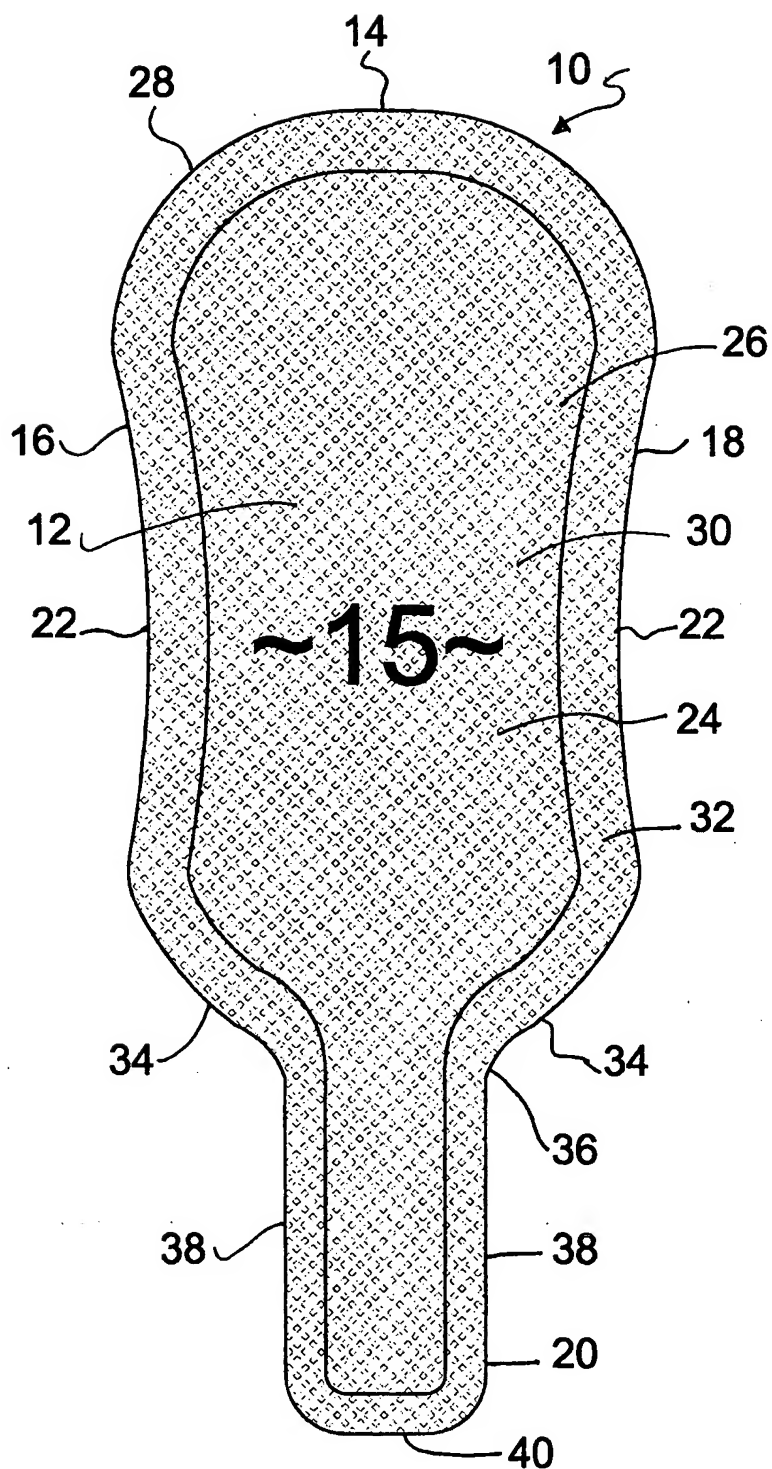


FIG. 1

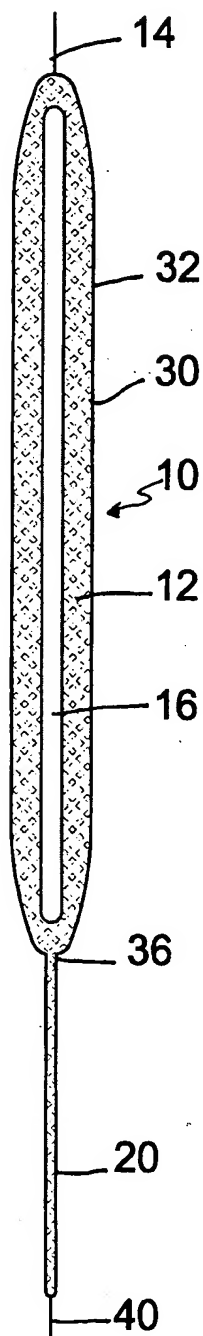


FIG. 2



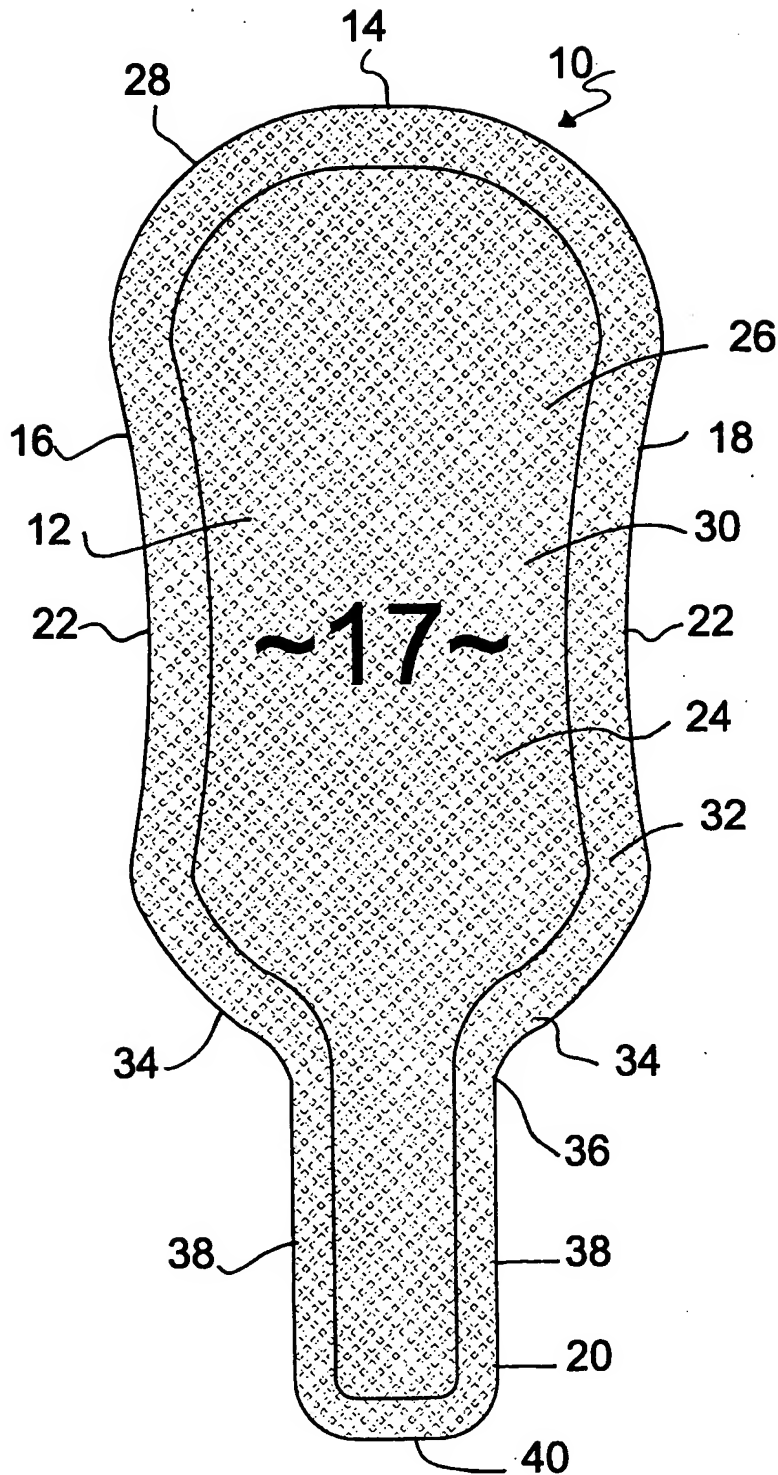


FIG. 5

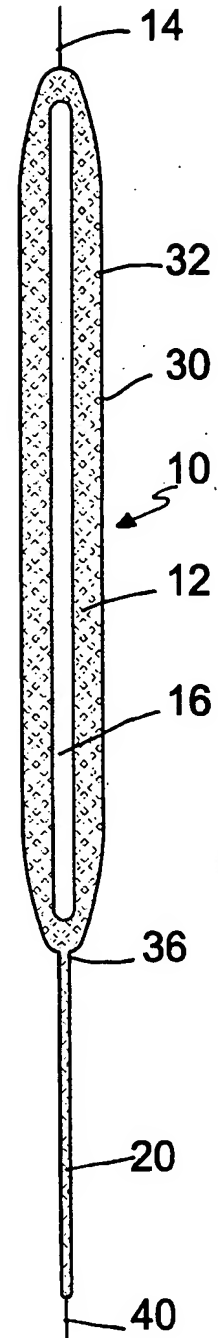


FIG. 3

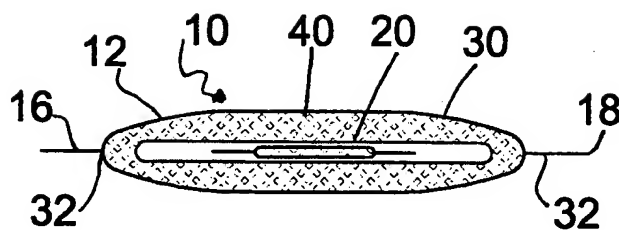


FIG. 4

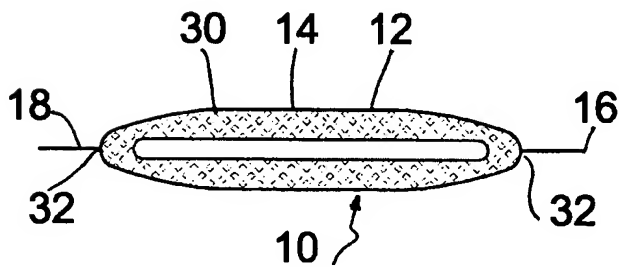


FIG. 6

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
1 November 2001 (01.11.2001)

PCT

(10) International Publication Number  
**WO 01/80771 A3**

(51) International Patent Classification<sup>7</sup>: **A61F 13/15**

(21) International Application Number: PCT/US01/11679

(22) International Filing Date: 10 April 2001 (10.04.2001)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
09/558,354 26 April 2000 (26.04.2000) US

(71) Applicant and

(72) Inventor: RUBIO, Ilse [US/US]; 1402 N. Alta Vista  
Boulevard # 208, Los Angeles, CA 90046 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,

CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,  
HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,  
LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX,  
MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL,  
TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian  
patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European  
patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE,  
IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF,  
CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Declaration under Rule 4.17:

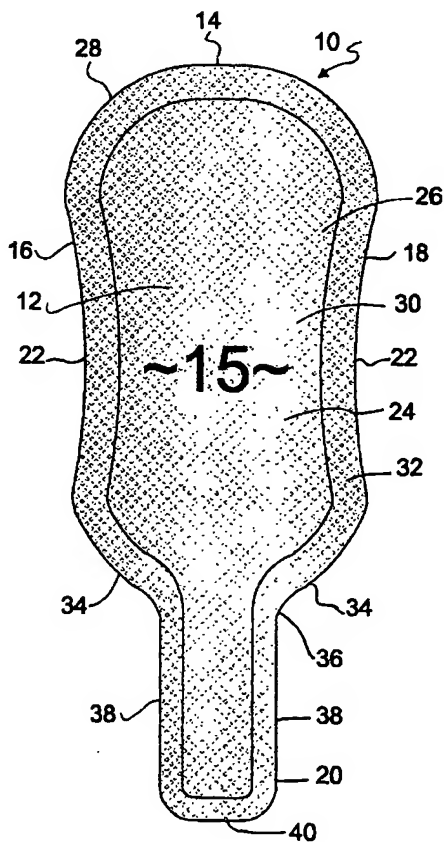
— of inventorship (Rule 4.17(iv)) for US only

Published:

— with international search report

[Continued on next page]

(54) Title: CLOSE FITTING LEAKAGE RESISTANT FEMININE HYGIENE PAD



(57) Abstract: A feminine hygiene pad having a wide absorbent front portion and a narrower, elongated rear portion of sufficient length to be retained between the buttocks of a user to better fit against the user's body and thereby control rearward leakage of fluid. The hygienic pad is smaller and better fitting and can be worn more discreetly with small sized and tight fitting garments.

WO 01/80771 A3



— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(88) Date of publication of the international search report:  
25 April 2002

# INTERNATIONAL SEARCH REPORT

International application No.

PCT/US01/11679

## A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : A61F 13/15

US CL : 604/387

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 604/387, 386, 389, 390, 385.01, 385.03, 385.04

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
EAST

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
x	US 5,713,886 A (Sturino) 03 FEB 1998 (03.02.1998) see entire document.	1-14
x	US 5,683,373 A (Darby) 04 NOV 1997 (04.11.1997) see entire document.	3, 11 and 12
x	US 5,827,261 A (Osborn, III et al.) 27 OCT 1998 (27.10.1998) see entire document.	1-14
x	WO 90/04956 (Muller) 05 NOV 1990 (05.11.1990) see entire document.	1-14

☐ Further documents are listed in the continuation of Box C.

☐ See patent family annex.

\* Special categories of cited documents:

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T"

later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X"

document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y"

document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"Z"

document member of the same patent family

Date of the actual completion of the international search

18 December 2001 (18.12.2001)

Date of mailing of the international search report

13 FEB 2002

Name and mailing address of the ISA/US

Commissioner of Patents and Trademarks  
Box PCT  
Washington, D.C. 20231

Facsimile No.

Authorized officer

John Weigs

Telephone No. 703-308-2702

